

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1 1.-10. (Canceled)

1 11. (Currently amended) A rapid diagnostic test system, comprising:
2 a single-use module including:

3 a test strip having a test stripe, a control stripe, and a receiving zone,
4 the test strip being capable of generating a ~~single~~ response at the test stripe and the
5 control stripe subsequent to contact of a single liquid sample ~~fluid~~ in the receiving
6 zone, the test stripe containing a labeling substance that comprises first persistent
7 fluorescent structures that emit light having a first frequency and second persistent
8 fluorescent structures that emit light having a second frequency, wherein each of the
9 first persistent fluorescent structures is attached to a substance capable of binding the
10 first persistent fluorescent structure to a target analyte after a ~~sample fluid~~ single
11 liquid sample containing the target analyte is applied to the receiving zone;

12 a light source positioned to illuminate a target area and a control area
13 ~~on the medium within the single-use module, the target area encompassing the test~~
14 stripe and the control area encompassing the control stripe;

15 a first photodetector positioned to measure light of the first frequency
16 ~~originating from the target area of the medium;~~

17 a second photodetector positioned to measure light of the second
18 frequency ~~originating~~ from the control area, wherein a signal from the second
19 photodetector indicating an intensity above a threshold level indicates that the sample
20 has passed through the target area; and

21 ~~an optical system positioned in a light path between the light source~~
22 ~~and at least one of the first and second photodetectors, the optical system arranged to~~
23 ~~modify incident light from one of the control area and the target area~~

24 a cap arranged to cover an opening in the single-use module to isolate
25 the single liquid sample, the single-use module having a terminal for receiving

26 electrical power from a source external to the single-use module for the light source,
27 the first photodetector, and the second photodetector, the terminal being part of an
28 interface that is received in a receptacle of a reusable module, the terminal comprising
29 conductors along an external surface of the single-use module, wherein application of
30 the single liquid sample to the receiving zone of the test strip excludes the use of the
31 light source, the first photodetector and the second photodetector disposed within the
32 single-use module from being used to analyze an additional liquid sample different
33 from the single liquid sample.

1 12. (Previously presented) The system of claim 11, wherein the reusable
2 module implements a user interface capable of indicating a test result.

1 13. - 20. (Canceled)

1 21. (Previously presented) The system of claim 12, wherein the user
2 interface comprises a display for the test result.

1 22. (Currently amended) The system of claim 11, wherein the ~~test~~
2 ~~signals are~~ signal is an electrical test ~~signals~~ signal.

1 23. (Previously presented) The system of claim 11, wherein the first and
2 the second persistent fluorescent structures comprise quantum dots.

1 24. - 25. (Canceled)

1 26. (Currently amended) The system of claim 11, wherein the ~~medium~~
2 test strip comprises a lateral-flow strip for performing a binding assay, and the target
3 area contains an immobilized substance that binds to and holds a complex including
4 one of the first persistent fluorescent structures and the target analyte.

1 27. - 38. (Canceled)

1 39. (Currently amended) The system of claim 26, wherein the second
2 persistent fluorescent structures bind to the control ~~area~~ stripe.

1 40. (Currently amended) The system of claim 11, further comprising:
2 a first color filter that ~~transmit~~ transmits light of the first frequency to the first
3 photodetector and blocks other frequencies; and
4 a second color filter that ~~transmit~~ transmits light of the second frequency to the
5 second photodetector and blocks other frequencies.

1 41. (Currently amended) The system of claim 11, wherein the control
2 ~~area~~ stripe contains an immobilized substance that binds and retains to the labeling
3 substance.

1 42. (Currently amended) The system of claim 11, further comprising
2 an optical system positioned in a light path between the light source and at least one of
3 the first and second photodetectors, the optical system arranged to process incident
4 light from one of the control area and the target area, wherein the optical system
5 comprises a lens.

1 43. (Currently amended) The system of claim ~~44~~ 42, wherein the
2 optical system comprises a chromatic prism.

1 44. (Currently amended) The system of claim ~~44~~ 42, wherein the
2 optical system comprises a thin-film filter.

1 45. (Currently amended) The system of claim ~~44~~ 42, wherein the
2 optical system comprises a diffractive grating.

1 46. (New) The system of claim 11, wherein the terminal of the single-
2 use module is configured to be pluggably inserted into the receptacle of the reusable
3 module for communicating test result signals between the single-use module and the
4 reusable module.